

Claims

[c1]

A method of operating a tire pressure monitoring system for a vehicle having a plurality of tire locations and a memory comprising:

activating a first initiator signal from a first initiator at a first tire location of the plurality of tire locations;

generating a first sensor signal having a first tire identification and an initiate portion in response to the first initiator signal;

receiving a first sensor signal;

storing the first sensor identification in the memory associated with the first of the plurality of tire locations when the first sensor identification is not in the memory;

repeating the steps of activating, generating, receiving and storing for each of the plurality of tire locations.

[c2]

A method as recited in claim 1 wherein prior to activating, generating a speed signal and activating when the speed signal is greater than a predetermined speed.

[c3]

A method as recited in claim 1 wherein prior to activating, generating an ignition signal and activating when the ignition signal indicates a run status.

[c4]

A method as recited in claim 1 after activating, initiating a timer, when the timer expires before receiving a first sensor signal, activating a fault indicator.

[c5]

A method as recited in claim 1 further comprising generating a count corresponding to the number of times activating is performed without receiving the first sensor signal, generating a fault when the count exceeds a predetermined count.

[c6]

A method as recited in claim 1 wherein the first tire comprises a spare tire in a spare tire location.

[c7]

A method of operating a tire pressure monitoring system having a memory comprising:

activating a first initiator at a first predetermined location;

receiving a first sensor signal having a first tire identification;

when the first sensor signal is indicative of an initial status and the tire identification is not existing in the memory, confirming the first sensor signal and storing the tire identification in a memory associated with a location;
when the first sensor signal is indicative of an initial status and the tire identification is existing in the memory, confirming the first sensor signal;
when the first sensor status is unconfirmed, performing the steps of activating, receiving and confirming.

[c8] A method as recited in claim 7 after activating, initiating a timer, when the timer expires before receiving the first sensor signal, activating a fault indicator.

[c9] A method as recited in claim 7 wherein prior to activating, generating a speed signal and activating when the speed signal is greater than a predetermined speed.

[c10] A method as recited in claim 7 wherein prior to activating, generating an ignition signal and activating when the ignition signal indicates a run status.

[c11] A method as recited in claim 7 further comprising generating a count corresponding to the number of times activating is performed without receiving the first sensor signal, generating a fault when the count exceeds a predetermined count.

[c12] A tire pressure monitoring system for a vehicle comprising:
a memory;
a plurality of initiators fixedly attached to the vehicle at a respective plurality of locations;
a plurality of tires having a respective plurality of tire transmitters generating a respective plurality of transmitter identification signals; and
a controller coupled to the plurality of initiators, said controller activating said plurality of initiators, receiving a plurality of respective sensor signals having respective tire identifications, when the plurality of respective sensor signals is indicative of an initial status and the respective plurality of tire identification signals is not existing in the memory, confirming the plurality of sensor signals and storing the confirmed signals in the memory, when the plurality of

respective sensor signals is indicative of an initial status and the plurality of respective tire identification signals is existing in the memory, confirming the first sensor signal, when the plurality of sensor statuses is unconfirmed, performing the steps of activating, receiving and confirming.

[c13] A system as recited in claim 12 further comprising a counter counting a number of activations, wherein said controller performing the steps of activating, receiving and confirming when the counter is below a predetermined count.

[c14] A system as recited in claim 13 when the counter reaches a predetermined count said controller generating a fault signal.

[c15] A system as recited in claim 12 wherein said controller activates said plurality of initiators sequentially.

[c16] A system as recited in claim 12 further comprising a vehicle speed sensor generating a vehicle speed signal, said controller activating said plurality of initiators when the vehicle speed signal is greater than a predetermined speed.

[c17] A system as recited in claim 12 further comprising an ignition sensor generating a run signal and an off signal, said controller activating said plurality of initiators when the ignition sensor generates a run signal.